

IN THE CLAIMS

1. (Original) A magnetic resonance apparatus comprising:
a magnetic resonance scanner having a cavity therein adapted to receive a subject, said cavity having a boundary surface;
a gradient coil system disposed in said cavity, said gradient coil system having a middle region and edge regions respectively disposed on opposite sides of, and adjoining, said middle region, said middle region having a reduced mechanical stiffness compared to said edge regions;
and
a supporting arrangement to support said middle region against said boundary surface of said cavity.

2. (Original) A magnetic resonance apparatus as claimed in claim 1 wherein said gradient coil system comprises a carrier.

Claim 3 has been amended as follows:

3. (Currently Amended) A magnetic resonance apparatus as claimed in claim 2 wherein said gradient coil system comprises a plurality of sets of sub-coils respectively forming gradient coils, ~~each composed of multiple sub-coils,~~ and said sub-coils in said sets of sub-coils being divided among at least two units disposed on said carrier ~~respectively comprising parts of said sub-coils.~~

Claim 4 has been amended as follows:

4. (Currently amended) A magnetic resonance apparatus as claimed in claim 3 wherein at least one of ~~these~~ said two units is a structurally independent unit.

5. (Original) A magnetic resonance apparatus as claimed in claim 3 wherein said two units, in said middle region, are attached to said carrier separated from each other.

6. (Original) A magnetic resonance apparatus as claimed in claim 2 wherein said carrier has a hollow cylindrical shape.

7. (Original) A magnetic resonance apparatus as claimed in claim 6 wherein said units each have a hollow cylindrical shape.

8. (Original) A magnetic resonance apparatus as claimed in claim 1 wherein said gradient coil system has a hollow-cylindrical shape.

9. (Original) A magnetic resonance apparatus as claimed in claim 1 wherein said cavity, in a region thereof corresponding to said middle region of said gradient coils system, has a barrel shape.

10. (Original) A magnetic resonance apparatus as claimed in claim 9 wherein said cavity has cylindrical regions respectively on opposite sides of, and adjoining, said region with said barrel shape.

11. (Original) A magnetic resonance apparatus as claimed in claim 1 wherein said scanner comprises a basic field magnet forming said cavity.

Claim 12 has been amended as follows:

12. (Previously presented) A magnetic resonance apparatus as claimed in claim 1 wherein said gradient coil system has a circumference, and wherein said support arrangement comprises at least three supporting elements circumferentially distributed around said gradient coil system.

13. (Original) A magnetic resonance apparatus as claimed in claim 12 wherein at least one of said supporting elements comprises a threaded bolt with a pressure plate facing said boundary surface of said cavity.

14. (Original) A magnetic resonance apparatus as claimed in claim 13 wherein said gradient coil system comprises a carrier having a threaded bore therein in which said threaded bolt is received.

15. (Original) A magnetic resonance apparatus as claimed in claim 1 wherein said gradient coil system is attached to said boundary surface of said cavity by an adhesive.

16. (Original) A magnetic resonance apparatus as claimed in claim 1 wherein said gradient coil system is wedged in said cavity.